

REMARKS

Claims 2-21 are pending in the present application. Claim 1 has been canceled. Claim 21 has been added. Claims 2-15 and 17-20 have been amended. Claims 8, 9, 15, 16, and 20 have been withdrawn as being directed to a non-elected species. Applicant reserves the right to file a divisional application directed to the non-elected claims, if needed.

Applicant respectfully requests reconsideration of the application in view of the foregoing amendments and the remarks appearing below.

Restriction/Election Requirement

Applicant hereby confirms the election of the claims that read on FIG. 1, i.e., claims 1-7, 10-14, and 17-19.

Rejections Under 35 U.S.C. § 102

Hawn

Claims 1-3, 6, 10-13 and 17 stand rejected under 35 U.S.C § 102(b) as being anticipated by *Hawn*, IBM Technical Disclosure Bulletin, on the assertion that *Hawn* discloses all of the limitations of these claims. Applicant respectfully disagrees.

Hawn discloses a conductive brush for removing unwanted electrostatic charges on insulating and dielectric surfaces. The brush includes a multitude of conductive points that intimately contact the surfaces so as to discharge the electrostatic charge thereon.

Claims 1-3, 6, 10-13 and 17, as amended, are directed to an apparatus, method and system for cleaning a microelectronics wafer. Each of these amended claims includes, among other things, a rotating wafer-cleaning member designed to remove surface contaminants from the surface of a microelectronics wafer.

Hawn is completely silent on, among other things, the conductive points of the *Hawn* brush having anything whatsoever to do with the cleaning of surface contaminants from a surface, let alone cleaning of such contaminants from a microelectronics wafer. Therefore, the *Hawn* reference does not disclose or suggest a cleaning member, a rotating cleaning member, a wafer-cleaning member and a rotating wafer cleaning member. Rather, the *Hawn* reference is directed solely to the removal of unwanted static electricity. Applicant respectfully submits that it is not reasonable to make any assumption, inference or deduction regarding the ability of the

Hawn brush to clean contaminants from the corresponding surface. Since *Hawn* does not disclose or reasonably suggest at least the foregoing features of amended claims 1-3, 6, 10-13 and 17, the *Hawn* reference cannot anticipate these claims.

Binkowski

Claims 1-3, 6, 10-13, and 17 stand rejected under 35 U.S.C § 102(b) as being anticipated by U.S. Patent No. 3,757,164, issued to *Binkowski*, on the assertion that *Binkowski* discloses all of the limitations of these claims. Applicant respectfully disagrees.

Binkowski discloses a device for reducing static electrical charges present on a sheet or web. The device comprises supple, resilient, conductive filaments of minute diameter attached to a support and means for electrically connecting the filaments to a ground potential. The device includes a plurality of electrically conductive carbonaceous fibers or filaments. The fibers/filaments are positioned to make complete and intimate electrical contact with a surface to conduct away static electrical charges present thereon without exerting a significant pressure against the contacted surface or, alternatively, are positioned to space the tips of the filaments from the web for use as an effective induction neutralizer.

Again, claims 1-3, 6, 10-13 and 17, as amended, are directed to an apparatus, method and system for cleaning a microelectronics wafer. Each of these amended claims includes, among other things, a rotating wafer-cleaning member designed to remove surface contaminants from the surface of a microelectronics wafer.

Binkowski is completely silent on, among other things, the fibers/filaments of the *Binkowski* device having anything whatsoever to do with the cleaning of surface contaminants from a surface, let alone cleaning of such contaminants from a microelectronics wafer. Therefore, the *Binkowski* reference does not disclose or suggest a cleaning member, a rotating cleaning member, a wafer-cleaning member and a rotating wafer cleaning member. Rather, the *Binkowski* patent is directed solely to the removal of unwanted static electricity. Applicant respectfully submits that it is not reasonable to make any assumption, inference or deduction regarding the ability of the *Binkowski* device to clean contaminants from the corresponding surface. Since *Binkowski* does not disclose or reasonably suggest at least the foregoing features of amended claims 1-3, 6, 10-13 and 17, the *Binkowski* patent cannot anticipate these claims.

Kitamura

Claims 1-4, 6-7, 10-14, and 17-19 stand rejected under 35 U.S.C § 103(a) as being anticipated by U.S. Patent No. 5,508,879, issued to *Kitamura*, on the assertion that *Kitamura* discloses all of the limitations of these claims. Applicant respectfully disagrees.

Kitamura discloses a charge removal brush for removing charges from transfer drums and papers in a Xerography image-forming apparatus, such as a copying machine and a printer, and from residual toner from the photoreceptor in the cleaning unit in the same apparatus. The charge removal brush includes a number of long, conductive filamentous elements for removing charges from an object when the charge removal brush comes in contact with the object, is disclosed. The charge removal brush includes a metal shaft rotatable about the axis thereof, a strip-like woven cloth including a base cloth and long conductive filamentous elements uniformly planted in the substantially entire surface of the base cloth, the strip-like woven cloth being spirally wound on the metal shaft with no gap, and a conductive fiber is woven into the base cloth in a state that the conductive fiber runs along the center line of the base cloth, which is extended in the lengthwise direction of the base cloth.

Claims 1-3, 6, 7, 10-14 and 17-19, as amended, are directed to an apparatus, method and system for cleaning a microelectronics wafer. Each of these amended claims includes, among other things, a rotating wafer-cleaning member designed to remove surface contaminants from the surface of a microelectronics wafer when the wafer is positioned in a wafer cleaning region of the apparatus and system.

Kitamura is completely silent on, among other things, the filamentous elements of the *Kitamura* brush having anything whatsoever to do with the cleaning of surface contaminants from a microelectronics wafer. *Kitamura* is also completely silent on an apparatus and system having a wafer cleaning region. Since *Kitamura* does not disclose or reasonably suggest at least these features of amended claims 1-3, 6, 7, 10-14 and 17-19, the *Kitamura* patent cannot anticipate these claims.

For at least the foregoing reasons, Applicant respectfully requests that the Examiner withdraw the present rejections of claims 1-4, 6, 7, 10-14 and 17-19.

Rejection Under 35 U.S.C. § 103(a)

Kitamura

Claim 5 stands rejected under 35 U.S.C § 103(a) as being unpatentable over the *Kitamura* patent in view of ordinary skill in the art on the assertion that it would have been obvious to a person having ordinary skill in the art at the time of the invention to make the *Kitamura* brush using carbon-filled perfluoroalkoxyalkane conductive filaments. Applicant respectfully disagrees.

The *Kitamura* patent is as described above relative to the anticipation rejection.

Claim 5, as amended, is directed to a brush roller having a non-filamentous cleaning surface and made of a carbon-filled perfluoroalkoxyalkane. The *Kitamura* patent, on the other hand, is directed to a filamentous brush. Therefore, even if it were proper to replace the conductive filaments of the *Kitamura* brush with carbon-filled perfluoroalkoxyalkane filaments, the combination is still completely silent on a brush roller having a non-filamentous cleaning surface.

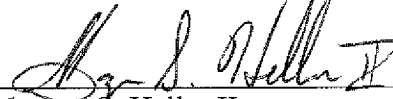
For at least this reason, Applicant respectfully requests that the Examiner withdraw the present rejection of claim 5.

CONCLUSION

In view of the foregoing, Applicant submits that claims 2-21, as amended, are in condition for allowance. Therefore, prompt issuance of a Notice of Allowance is respectfully solicited. If any issues remain, the Examiner is encouraged to call the undersigned attorney at the number listed below.

Respectfully submitted,

INTERNATIONAL BUSINESS MACHINES CORP.

By: 
Morgan S. Heller II
Registration No. 44,756

DOWNES RACHLIN MARTIN PLLC
Tel: (802) 863-2375
Attorneys for Assignee